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## TRANSMITTAL FORM

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		Application Number	10/783522-Conf. #7481
		Filing Date	February 20, 2004
		First Named Inventor	Roy LURIE
		Art Unit	1631
		Examiner Name	P. S. Whaley
Total Number of Pages in This Submission		Attorney Docket Number	MWS-109

**ENCLOSURES (Check all that apply)**

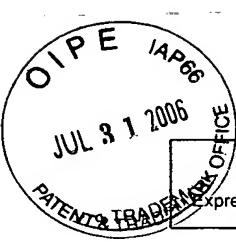
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<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
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**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name	LAHIVE & COCKFIELD, LLP		
Signature			
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Date	July 31, 2006	Reg. No.	51,146

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Docket No.: MWS-109  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Roy Lurie *et al.*

Application No.: 10/783522

Confirmation No.: 7481

Filed: February 20, 2004

Art Unit: 1631

For: METHOD AND APPARATUS FACILITATING  
COMMUNICATION WITH A SIMULATION  
ENVIRONMENT

Examiner: P. S. Whaley

**RESPONSE TO RESTRICTION REQUIREMENT**

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This is in response to the restriction requirement set forth in the Office Action mailed June 30, 2006.

The Examiner has required restriction between the following inventions in the above-identified application:

- I. Claims 1-36 drawn to a system, method and article of manufacture for modifying a model of a biological process responsive to experimental results generated by an in situ experiment conducted on an experimental platform, classified in class 702, subclass 019; and
- II. Claims 37-50 drawn to a method and article of manufacture for modifying a model of a chemical reaction responsive to experimental results generated by an in situ experiment conducted on an experimental platform, classified in class 702, subclass 019.

Accordingly, Applicants hereby elect Group I, Claims 1-36 for continued examination, with traverse.

The Examiner asserts that the inventions of Group I and Group II are unrelated because they have different modes of operation. Applicants respectfully traverse the restriction requirement with the following arguments.

Applicants respectfully submit that the inventions of Group I and Group II are related. The current Office Action states that “In general, methods for modeling biological processes and chemical reactions rely upon biological and chemical data sets that are not co-extensive, as well as distinct mathematical algorithms.” Many biological processes, at the most basic level, are completely described by chemical reactions, thus these biological processes and the chemical reactions that describe them rely on the same chemical and biological data set. Even biological processes that are not described solely in terms of chemical reactions are often described by similar differential equations or follow the same rate law. In Figure 3A, the modeling environment displays reactions present in the Field-Koros-Noyes model of the Belousov-Zhabotinsky reaction (a chemical reaction). Examples of the kinetic laws associated chemical reactions are listed on page 11, lines 14-15, “mass action or Michaels-Menten.” Figure 3B depicts in tabular form reactions for simulating the E. Coli heat shock response model (a model of a biological process). Figure 3B shows that the reactions describing this process are also governed by the kinetic law of mass action. Clearly, both the model of the chemical reaction and the model of the biological process will use mathematical algorithms specific to the law of mass action. Page 25, line 22 to page 26, line 5 describes how both biological processes and chemical reactions are modeled as “sets of differential, difference, algebraic, and/or recursive equations.” Although, there is not complete overlap between biological and chemical data sets, there is significant overlap. Additionally, many mathematical algorithms are used to model both biological processes and chemical reactions, thus the species are related.

Applicants further submit that the claims of Group I and Group II overlap in scope. As is stated in MPEP 806.04(f), “a restriction requirement is proper if the species are mutually exclusive... the claims must not overlap in scope.” As discussed previously, many biological processes, at the most basic level, are completely described by chemical reactions, thus the claims directed to modifying a model of a biological process overlap with the claims directed to modifying a model of a chemical reaction.

The Examiner states that these inventions "have acquired a separate status in the art because of their recognized divergent subject matter." Applicants respectfully submit that in the Office Action both Group I and Group II are listed as classified in class 702, subclass 019, indicating that they are closely related.

Applicants submit that the species of Group I and Group II are related and that the claims directed to these two species overlap, thus the restriction requirement is improper. Applicants respectfully request that the Examiner withdraw the restriction requirement.

Applicants believe no fee is due with this statement. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. MWS-109 from which the undersigned is authorized to draw.

Dated: July 31, 2006

Respectfully submitted,

By \_\_\_\_\_

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